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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,638	11/20/2001	Jonathan T. Foote	FX/A0011	1144

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/989,638

Applicant(s)

FOOTE, JONATHAN T.

Examiner

LUONG T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) 9-21 and 24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-8 and 22 is/are allowed.
- 6) ☒ Claim(s) 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse in the reply filed on 11/30/2005 is acknowledged.
2. Claims 9-21 and 24 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/30/2005.

Response to Arguments

3. Applicant's arguments filed on 10/26/2006 have been fully considered but they are not persuasive.

In re page 9, Applicant argues that the examiner has failed to provide any motivation or suggestion to modify the references or combine the teaching.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kumar et al. fails to disclose the step of cross-fading said common field of view of

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said first image and said second image. However, Hsieh et al. teaches an intelligent stitcher for panoramic image-based virtual worlds which includes a blending engine for blending (cross-fading) intensity values of pixels of the first warped image with corresponding pixels of the second warped image, thereby blending intensity values of the common overlapping areas between the first and the second warped images (column 3, lines 27-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Kumar et al. by the teaching of Hsieh et al. et al. in order to blend intensity values of the common overlapping areas between the first and the second warped images. In this way, intensity discontinuities between matched pixels are smoothed (column 3, lines 32-37).

In re page 9, Applicant argues that the references do not teach the “cross-fading” of the claimed invention.

In response, regarding claim 25, the Applicant recited limitation “cross-fading said common field of view of said first image and said second image.” The Examiner considers that claim 25 as recited still does not distinguish from Kumar et al. in view of Hsieh et al. Hsieh et al. teaches an intelligent stitcher for panoramic image-based virtual worlds which includes a blending engine for blending (cross-fading) intensity values of pixels of the first warped image with corresponding pixels of the second warped image, thereby blending intensity values of the common overlapping areas between the first and the second warped images (column 3, lines 27-37). Noted that it is well known to one of ordinary skill in the art that the blending technique can be called as cross fading as stated in McDowall et al. (US 6,285,370), column 4, lines 22-25.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25-30 are rejected over Kumar et al. (US 5,963,664) in view of Hsieh et al. (US 6,011,558).

Regarding claim 25, Kumar et al. discloses a method for combining at least a portion of a plurality of images, comprising the steps of:

obtaining a first image and a second image, wherein at least a portion of said first image and said second image include a common field of view (camera 104₁ obtains first image, camera 104₂ obtains second image, first and second images have a common field of view, figure 1, column 4, line 56 to column 5, line 17),

adjusting at least a portion of said first image to reduce an image disparity between said common field of view of said first image and said second image (image processing system 100, figures 1-2, 6, column 9, line 65 to column 10, line 24);

combining at least a portion of said first image and at least a portion of said second image subsequent to said step of adjusting (image processing system 100, figure 1, column 4, line 56 to column 5, line 17).

Kumar et al. fails to specifically disclose the step of cross-fading said common field of view of said first image and said second image. However, Hsieh et al. teaches an intelligent stitcher for panoramic image-based virtual worlds which includes a blending engine for blending (cross-fading) intensity values of pixels of the first warped image with corresponding pixels of the second warped image, thereby blending intensity values of the common overlapping areas between the first and the second (column 3, lines 27-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Kumar et al. by the teaching of Hsieh et al. et al. in order to blend intensity values of the common overlapping areas between the first and the second warped images. In this way, intensity discontinuities between matched pixels are smoothed (column 3, lines 32-37).

Regarding claim 26, Kumar et al. discloses adjusting said second image to reduce said image disparity between said common field of view of said first image and said second image (reduce the residual displacement between two images, figure 4, column 8, lines 20-67).

Regarding claim 27, Kumar et al. discloses the step of adjusting said second image includes shifting said second image a second distance (image processing system 100 combines images and provides image alignment, column 5, lines 10-15, column 9, line 65 to column 10, lines 24; this indicates that the image processing system 100 adjusts said second image includes shifting said second image a second distance).

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Regarding claim 28, Kumar et al. discloses said second distance is a distance where the image disparity is reduced (reduce the residual displacement between two images, figure 4, column 8, lines 35-51).

Regarding claim 29, Kumar et al. discloses warping said first image and said second image into a common coordinate system of a composite image subsequent to said step of obtaining (warping process, figure 3, column 5, line 63 to column 6, line 25).

Regarding claim 30, Kumar et al. discloses wherein said step of cross-fading is that said first image and said second image are faded by reducing pixel intensities across said common field of view (Hsieh et al. discloses a blending engine for blending intensity values of pixels of the first warped image with corresponding pixels of the second warped image, thereby blending intensity values of the common overlapping areas between the first and the second warped images, column 3, lines 27-37. In this way, intensity discontinues between matched pixels are smoothed. And noted that the blending technique is also called as cross-fading technique).

Allowable Subject Matter

6. Claims 1, 4-8, 22 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1, 4-8, 22, see Examiner's statement of reasons for the indication of allowable subject matter as indicated in Paper mailed on 7/26/2006.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

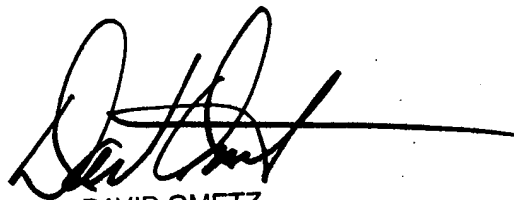
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN LN
12/27/06

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal line extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER